Topic Page: Kaleidoscope

Definition: **kaleidoscope** from *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Optical toy invented by the Scottish physicist David Brewster in 1816. It usually consists of a pair of long mirrors at an angle to each other, and arranged inside a triangular tube containing pieces of coloured glass, paper, or plastic. An axially symmetrical (hexagonal) pattern is seen by looking along the tube, which can be varied infinitely by rotating or shaking the tube.

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Kaleidoscope Heaven

Summary Article: **kaleidoscope**
From *The Columbia Encyclopedia*

(kəlī'dəskōp), optical instrument that uses mirrors to produce changing symmetrical patterns. Invented by the Scottish physicist Sir David Brewster in 1816, the device is usually a hand-held tube, a few inches to as much as twelve feet in length, and looks like a small telescope. At one end of the tube is an eyepiece; at the other end colored chips of glass are loosely sandwiched between two glass disks. Between the ends of the tube are two rectangular plane mirrors. The long edge of one of the two mirrors lies against the long edge of the other at an angle, their intersection lying close to the axis of the tube. The glass chips form patterns where they lie, and these patterns change as the chips fall into new positions when the tube rotates. Each pattern undergoes multiple reflections in the mirrors in such a way as to produce a resulting symmetrical pattern as seen through the eyepiece.

The world's largest kaleidoscope, located in Mt. Tremper, N.Y., is 64 ft (19.5 m) tall. There is no eyepiece; people stand inside the base to view the image, which is projected downward onto three reflective panels to produce a spherical cluster of 254 hexagonal facets that appears to be 50 feet across. For Expo 2005 in Aichi, Japan, a 130-ft-high (40-m) kaleidoscope was constructed in the three-sided Earth Tower; three enormous, oil-filled revolving disks filtered incoming light that was reflected by huge mirrors to produce a spherical image some 118 ft (36 m) in diameter; the image was viewed by standing inside the tower.

See Baker, C. , Kaleidorama (1990);.
Newlin, G. , Simple Kaleidoscopes: 24 Spectacular Scopes to Make (1996).

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Harvard

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